

Exhibit C

Subject to Protective Order

EXPERT WITNESS REPORT

La Union del Pueblo Entero v. Abbott, No. 5:21-cv-844 (W.D. Tex.) (lead case)

Submitted by

Mark Hoekstra, PhD

Date of Report

March 3, 2023

I. Introduction

1. I have been engaged to respond to the second supplemental report dated February 10, 2023, that was written by Professor Eitan Hersh in the consolidated case *La Union del Pueblo Entero v. Abbott*, No. 5:21-cv-844 (W.D. Tex.). My analysis is based on my knowledge and experience as an active research economist who is well versed in the frontier empirical methods used in causal analyses.

II. Qualifications and Compensation

2. I am the Rex B. Grey Professor of Economics at Texas A&M University in College Station, Texas, where I have been on the faculty since 2011. Prior to arriving at Texas A&M, I was an assistant professor of economics at the University of Pittsburgh. I received my PhD in Economics from the University of Florida in 2006. I have published more than 20 papers in peer-reviewed journals in economics, including the American Economic Association's (AEA) top journal of *American Economic Review* as well as the top AEA journals relevant to my field (*American Economic Journal: Applied Economics* and *American Economic Journal: Economic Policy*) and top field journals (*Journal of Labor Economics*; *Journal of Public Economics*; *Journal of Human Resources*). These studies have used a wide variety of administrative datasets, including data on voting. I serve as a reviewer for approximately 20 paper submissions per year, including for top economics journals. I serve as an Associate Editor at the *Journal of Labor Economics* (since 2018) and at the *Journal of Human Resources* (since 2015), which are the top two field journals in labor economics.

3. The common theme throughout both my research and my teaching is careful attention to the assumptions underlying various research designs used to assess the causal impact of policies. Some of my research is used as examples in the textbook *Causal Inference: The Mixtape* by Scott Cunningham, which is a leading graduate-level book on empirical methods used in economics. I teach a PhD-level field course in labor economics, the focus of which is on understanding and assessing the

various research methodologies used by economists and other social scientists. These include the methods used to test for racial and gender bias in different settings. I also teach part of the core 1st-year PhD sequence in econometrics, in which I focus on how to assess causality in non-experimental contexts. I am perhaps best known among the PhD students as someone who offers advice on research projects, including whether the proposed method is sufficient to answer the question at hand. I recently won department-level awards for both the quality of graduate teaching and the quality of feedback given to students. During my time at Texas A&M, I have chaired more than 10 dissertation committees, and many of my students have gone on to careers at R-1 research universities. I have served on the committees of countless more PhD students.

4. I also hold an appointment as a Research Fellow at the National Bureau of Economic Research based in Cambridge, Massachusetts, and as a Research Fellow at the Institute for Labor Economics (IZA) based in Bonn, Germany. In 2012 I received the IZA Young Labor Economist Award.

5. I am being compensated for my time at the rate of \$600/hour. I have not previously testified as an expert witness.

III. Assessment of Professor Hersh's second supplemental report – Overview

6. What does the November 2022 election—the first federal election since the passage of SB1—tell us about the actual impact of SB1 on mail-in voting? To what extent did the new identification requirements impose a sufficiently large burden on voters as to deter voting? A useful upper-bound for the right answer to that question is buried deep inside Professor Hersh's Second Supplemental Report. In it, he calculates that among the more than 8.1 million votes cast, there were only 6,355 mail-in ballots that were rejected for a reason relating to identification, and where the voter did not cure the ballot or vote in person. That is well less than one out of every one thousand votes

statewide. Importantly, even this figure of 6,355 votes overstates the extent to which election officials failed to count mail-in votes that had been legally and properly cast, for two reasons:

- A. Some, and potentially all, of these ballots may have been illegitimate. There is nothing in Professor Hersh's report, or in the underlying data, to indicate whether or not those rejected mail-in votes were cast legally. To the extent that some or all of those votes were illegitimate, Professor Hersh consistently misinterprets illegitimate votes as evidence that SB1 improperly caused a reduction in legitimate voting.
- B. Some, and potentially all, of these 6,355 ballots could have been rejected because voters failed to write down *any* identification number on the ballot. Professor Hersh cannot distinguish between ballots that were cast without writing down any identification number at all, from those that were cast, to quote his first report, "in perfect accordance with the state's instructions under SB 1". In fact, there is nothing in Professor Hersh's report, save for one flawed analysis that I discuss below, that suggests the database issues he emphasizes are responsible for *any* of these 6,355 mail-in vote rejections under SB1.

7. As a result of these factors, the proper interpretation of Professor Hersh's analysis is that there were *at most* 6,355 fewer legitimate votes cast and counted as a result of SB1, out of more than 8.1 million total votes. For the reasons described above, the true number of legally cast mail-in votes that went uncounted—and especially the true number of legally and properly cast votes that went uncounted—is almost certainly smaller than that, and possibly zero.

8. Moreover, the identification requirements of SB1 are still relatively new, and as with any new process, there is a learning curve for both election administrators and voters. That fact, combined with the likelihood that at least some of the rejected votes counted by Professor Hersh were rejected due to voter error, suggests that the effect of SB1 going forward will likely be smaller than it was for the November 2022 election. And as described above, the impact on that election was less than, and possibly much less than, 0.078 percent of all votes cast and counted.

9. As alluded to above, there is only one analysis in Professor Hersh's Second Supplemental report that claims to provide any evidence that ballot rejections were "likely to be related to SB 1 requirements". I demonstrate below that this analysis is based on three faulty assumptions. The consequence of those assumptions is that Professor Hersh would improperly conclude that the

higher rejection rates among those he classifies as “at risk” are caused by the database issues. Instead, the higher rejection rates could be due to differences in failing to provide a signature, or in failing to include a statement of residence. Alternatively, some or all of the differential could be due to “at risk” voters viewing in-person voting as a close-if-not-perfect substitute, consistent with empirical evidence I documented in my first report. Third, the differential could be due to other differences between the two groups of people, who are likely different in many ways, including those not observed in the data.

10. Finally, in his Second Supplemental report, Professor Hersh also replicates the analysis of the state databases that he performed in his previous reports. In doing so, he addresses the following question: How many Texans would need to, in Professor Hersh’s words, “be lucky”, in order to cast a mail ballot without their application or ballot being rejected? As I documented in my response to his initial report, there are numerous flawed assumptions in that analysis. Put simply, that analysis assumed that everything that can go wrong with absentee voting will go wrong, ignored important aspects of the voting process, and did so for a population of mail-in voters that is vastly larger than anything observed in Texas history, including during the worst pandemic in 100 years.

11. Strikingly, Professor Hersh’s own empirical analyses in his Second Supplemental Report directly contradict most, if not all, of the assumptions and conclusions he made in his analyses of the voter databases.

- A. For example, his simulation of voting using the voter databases ignored the ballot curing process, and assumed that would-be absentee voters are never willing to vote in person instead. In contrast, Professor Hersh’s analysis of actual voting in the 2022 election indicated that a large fraction of initially-rejected mail-in ballots were in fact cured, and that nearly half of mail-in ballots rejected for identification reasons are associated with a registrant whose record also shows they subsequently chose to, and were able to, vote successfully either by mail or in person.
- B. In assuming that everything that can go wrong will go wrong, Professor Hersh’s simulation of voter databases also concluded that 15 percent of absentee ballots would be rejected. His analysis of actual voting in the 2022 general election shows that only 4.1 percent of mail-in ballots were initially rejected.

12. The net result of these, and other, unfounded assumptions is that Professor Hersh's analyses of voter databases, both in his second supplemental report and earlier reports, make the dire warning that as many as 2.7 million voters could be impacted by SB1's identification restrictions. His analysis of actual voting directly contradicts this and shows that at most—*at most*—6,355 fewer votes were cast and counted than would have been otherwise. Moreover, some or all of these may have been illegitimate, or may have been caused by a voter's failure to write down any identification number, rather than being caused by the database issues emphasized by Professor Hersh.

IV. The maximum number of votes not counted in the November 2022 federal election due to SB1's identification requirements

13. To what extent did SB1's identification requirements result in fewer legitimate votes being cast and counted during the 2022 federal election? This is an important question for understanding the likely burden that SB1 places on would-be absentee voters. Were SB1's identification rules so stringent, and the voter databases so insufficient, as to burden would-be legitimate absentee voters so much that they were unable to cast votes? If the answer were yes, this would indeed be problematic. But the data do not support such a conclusion.

14. It turns out that Professor Hersh's analysis of the 2022 election data contains a useful estimate of the maximum number of legally and properly cast votes that election officials failed to count, though it is buried deep in Professor Hersh's report. Despite the dire warnings that Professor Hersh had issued and continues to issue regarding the likely impact of the database issue on absentee voting—namely, that 2.7 million registered voters in Texas could be impacted—Professor Hersh's own analysis indicates there were only 6,355 absentee votes that were rejected, where the voter also did not subsequently cast a ballot successfully either by mail or in person. This is shown in paragraph 21 of Professor Hersh's Second Supplemental report. Professor Hersh states there are 11,430 records indicating votes that were rejected due to reasons relating to identification verification. However,

nearly half of the registered voters associated with these rejections—44.6 percent—were subsequently able to vote successfully either in person or by curing their ballot. That suggests that out of the more than 8.1 million votes cast in Texas during the 2022 federal election, only 6,355 mail-in votes were rejected due to an identification-related reason, and associated with names of individuals who were not subsequently observed to vote successfully either by mail or in person.¹

15. Put another way, when put into practice, the concerns Professor Hersh identified reduced the total number of votes cast and counted in the general election by, at most, 0.078 percent.

16. Moreover, even this figure of 6,355 votes overstates the true extent to which SB1's identification requirements reduced the total number of legitimate votes cast by voters who, in Professor Hersh's words, voted "in perfect accordance with the state's instructions under SB 1", for two reasons:

- A. Some, and potentially all, of these ballots may have been illegitimate. Put simply, there is nothing in Professor Hersh's report, or in the underlying data, to indicate whether or not those rejected mail-in votes were legitimate ballots cast by the person who was registered to vote under that name. To be clear, I do not know whether these 6,355 votes were cast legally. But neither can Professor Hersh know, based on the data available to him. What I know is that it is possible for some or all of those votes to have been illegitimate, in which case Professor Hersh consistently misinterprets illegitimate votes as evidence that SB1 improperly caused a reduction in legitimate voting.

This error leads to perverse consequences for the evaluation of SB1, given that the Texas Legislature's stated purpose for passing the law was to reduce the likelihood of illegally cast ballots. Even if the only effect of the identification restrictions imposed by SB1 is to prevent fraudulent votes from being counted, Professor Hersh misinterprets those ballot rejections as evidence that SB1 is improperly reducing legitimate voting, rather than accomplishing its stated aim.

- B. Some, and potentially all, of these 6,355 ballots could have been rejected because voters failed to write down *any* identification number on the ballot. Put simply, Professor Hersh cannot distinguish between ballots that were cast without writing down any identification number at all, and those that were rejected because the number written down did not match the number in the state database due to the issues he emphasizes. That is because all of the codes that he uses to infer the rejection was due to identification verification, which are listed in footnote 7 of his second supplemental report, indicate things like "Incorrect or Missing SSN/TDL #". None of them distinguish between not writing down

¹ 11,430*(1-0.446) = 6,355.

one's ID number at all and writing down a number that does not match the state database. That information is simply not recorded in the data.

17. In fact, there is nothing in Professor Hersh's report, save for one flawed analysis that I discuss in the following section, that suggests the database issues he emphasizes are responsible for *any* mail-in ballot rejections, including for these 6,355 cases.

18. In short, the problem is that Professor Hersh (mis)classifies any ballot rejection as due to SB1, even if that is a rejection due to voter error, or if the vote itself is illegitimate. This is particularly misleading given that Professor Hersh uses the same language in attributing blame for the ballot rejections in the actual data as he does when he describes potential ballot rejections based on his simulation using voter databases. For example, in his second supplemental report, Professor Hersh asserts that 2.7 million registered voters in Texas could run into problems when voting absentee due to the "SB 1 identification verification rule", or due to "SB 1's verification procedures". His empirical analysis of actual voting echoes this language in that it makes no fewer than six references to ballots being rejected on account of "SB 1 identification rules", "SB 1 identification issues", or "SB 1 grounds". Yet the empirical analysis cannot distinguish between rejections due to state database issues from rejections due to voter error, or even due to fraudulent voting.

19. Professor Hersh's inability to distinguish voters' failures to follow instructions from rejections caused by the database issue he emphasizes also has important implications going forward. To the extent that some or all of the rejections he documents are due to voters failing to write down an identification number, we should expect to see further declines in mail-in ballot rejections in future elections. That is because as with most new rules, there is a learning curve for both election administrators and voters. This was evident in the fact that the mail-in ballot rejection rate fell from 12.4 percent to 2.7 percent from the 2022 primary election to the 2022 general election.² It was also

² [Rejections of Texans' mail ballots decline markedly from big surge in March primary \(dallasnews.com\)](https://www.dallasnews.com/news/2022/05/26/Rejections-of-Texas-mail-ballots-decline-markedly-from-big-surge-in-March-primary/)

explicitly acknowledged by the Brazos County Elections Administrator, who indicated that many of the November 2022 mail-in ballot rejections for the November 2022 election she had seen at the time of the interview were from voters who had not yet learned, despite election administrators' best efforts, to follow the new rules.³

V. The only evidence offered by Professor Hersh suggesting ballot rejections are due to the database issue is deeply flawed

20. Professor Hersh's main argument, throughout all of his reports, is that imperfections in the state databases used to verify a mail-in voter's identity will cause officials to reject legitimate votes, even if individuals fill out the ballot properly. The problem, which is both unacknowledged and unaddressed by Professor Hersh, is that Professor Hersh cannot discern in the data whether a mail-in ballot was rejected because the voter did not write down an identification number (or wrote the identification number incorrectly), or if the number was correctly written down by the voter but did not match the number in the state database. Thus, as described in the previous section, it is not clear that *any* of the rejected mail-in ballots that Professor Hersh identifies in his data are due to the database issue he emphasizes so much.

21. Professor Hersh only provides one analysis claiming to provide evidence that it is this database issue, rather than voter error or even illegitimate voting, that causes the mail-in vote rejections. Unfortunately, this analysis is deeply flawed. In paragraph 27, Professor Hersh compares the mail-in ballot rejection rates of those 2.7 million Texans who he identifies as "at-risk" (mostly because they are associated with two ID numbers in the system), versus the rest of registered voters.

³ Of the voters who had voted in the primary, Ms. Hancock said "This is a new process for them. Those who voted in the primary and the runoff know what they need to do, as opposed to someone who is only voting in the November election." See <https://www.texastribune.org/2022/10/20/voting-texas-ballot-rejections/>.

While this may seem intuitively sensible, there are three critical flaws in Professor Hersh's execution of this analysis, any one of which is sufficient to be fatal.

- A. The first problem is that in comparing the rate at which the two groups never cast a successful ballot, Professor Hersh inexplicably counts all of the mail-in ballots that were not counted, even though many, if not most, of these ballots were not counted for reasons that have nothing to do with the identification requirements of SB1. For example, Professor Hersh counts those whose ballots were rejected for reasons that have nothing to do with the identification requirements of SB1, as well as those whose ballots were returned late, or even not returned at all. As a result, the resulting analysis provides no evidence that the difference in the mail-in ballot success rates of the two groups is due to SB1, rather than other unrelated differences in behavior across the two groups.
- B. The second problem is that, as in his analyses of voter databases, Professor Hersh ignores the issue of substitution. As I noted in my first report, the best research on this topic, published in a top journal by Stanford and UCLA researchers, indicates that Texas absentee voters view absentee and in-person voting as close-if-not-perfect substitutes. In this analysis, Professor Hersh does not account for this, at all. Thus, it is possible the entire differential documented by Professor Hersh is driven by the fact that the voters deemed to be "at-risk" by Professor Hersh subsequently vote in person at higher rates than those deemed "not at-risk". Indeed, this would be unsurprising, if Professor Hersh is correct that these individuals are somewhat more likely to encounter a problem when attempting to vote absentee. Yet Professor Hersh's analysis ignores this issue.
- C. The third problem is that Professor Hersh ignores the fact that correlation is not causation. That is, anytime there are two groups of individuals that differ in one dimension—in this case, whether they qualify as "at risk" in Professor Hersh's analysis—they can differ in other ways as well, such as the likelihood of voting by mail, for reasons that have nothing to do with the first factor.⁴

22. To be clear, Professor Hersh's analysis on this issue would conclude that the difference in mail-in voting rejection rates "is likely to be related to SB 1 requirements" *even if* the entire differential were due to the one group of people being more likely to forget to write down a number or sign their name on the ballot, or even remembering to return the ballot at all, none of which have anything to do with the database issue he emphasizes. Similarly, Professor Hersh's analysis would conclude the difference "is likely to be related to SB 1 requirements" *even if* the entire differential were

⁴ A trivial example is that while people who live in rural areas may vote for Republicans more often than people who live in urban areas, that does not mean that the locational difference is causing the difference in voting preferences. Rather, it is possible that these individuals differ in other ways, such as views on the appropriate size of government, or any number of other factors, that could influence both locational choice and voting preferences.

due to “at-risk” voters choosing the close-if-not-perfect substitute of voting in person more often than not-at-risk voters. Finally, Professor Hersh’s analysis would conclude the difference “is likely to be related to SB 1 requirements” *even if* the difference in successful mail voting is caused by other differences between “at-risk” and “not at-risk” groups, which likely differ in many ways, including those unobserved in the data.

VI. Professor Hersh’s assumptions and conclusions from his analysis of state databases are directly contradicted by his own analysis of the data from the 2022 federal election

23. In his second supplemental report, Professor Hersh replicates an analysis previously performed in earlier reports aimed at assessing the fraction and number of registered voters in Texas who could encounter a problem when attempting to vote absentee under SB1. He did this by attempting to simulate what would hypothetically happen if every registered voter in Texas were to vote absentee, under a range of assumptions about voting laid out in several thousand lines of code.

24. In my response, I documented many of the implausible assumptions of that analysis. Put simply, Professor Hersh assumed that everything that could go wrong in absentee voting would go wrong, and did so for a population of absentee voters that is vastly larger than anything Texas has ever observed in history. In addition, the assumptions he used ignored important aspects of actual absentee voting in Texas, such as the fact that the Texas Secretary of State recommends that voters write down two numbers, which would solve nearly all of the database issues emphasized by Professor Hersh; the ballot curing process; and the fact that existing empirical evidence indicates in-person voting is a close-if-not-perfect substitute for absentee voting.

25. It turns out that Professor Hersh’s own empirical analyses in his Second Supplemental Report directly contradict the conclusions from his analyses of the voter databases, and the assumptions used to generate those conclusions. These contradictions include the following:

- A. Professor Hersh's simulations assumed that zero mail-in voters who encountered problems would cure their ballots. That assumption is refuted by his own analysis of actual voting in the 2022 federal election. In Paragraph 19, he points out that of the 13,638 mail-in ballot rejections, "about 40%" have a status code that indicates the ballot was accepted, which Professor Hersh attributes to the ballot being initially rejected but eventually cured and accepted.
- B. Similarly, Professor Hersh's simulations of voting assume that zero absentee voters who encounter difficulties will vote in person. In contrast, while he does not break down in-person voting separately from the curing of ballots, his analysis of actual voting in the 2022 federal election indicates this likely happened. In Paragraph 21, he states that of the 11,430 records indicating voters who were rejected due to an identification-related reason, nearly half of them (44.4 percent) are associated with a registrant whose record also shows they were able to vote successfully either by mail or in person. Importantly, as noted earlier, neither Professor Hersh nor I can rule out the possibility that the voters who voted successfully were the *only* ones among these 11,430 rejections who were attempting to cast legitimate votes.
- C. As I demonstrated in my first report, Professor Hersh's analysis of voter records assumes that every Texan who has more than one DPS identification number writes down the number they did *not* register with. Put differently, faced with deciding which of two DPS numbers to put down on the ballot, Professor Hersh assumes that not only will every Texan fail to remember the number they registered with, but they will also guess wrong, every time. Similarly, Professor Hersh assumes that every absentee voter will write down only one number, even though the Texas Secretary of State, and at least some local election officials, strongly recommend writing down both a DPS number and the last four digits of the Social Security Number.⁵

26. Professor Hersh's analysis of actual voting in 2022 also directly contradicts these assumptions. While Professor Hersh's simulations indicated that up to 16 percent of absentee voters would encounter problems, his analysis of actual voting in Paragraph 19 of his report indicates that the initial rejection rate was one-fourth of that.

27. What is the net effect of all of the assumptions of Professor Hersh's analysis of state voter databases? Professor Hersh would have you believe his dire warnings, both in the second supplemental report and earlier reports, that 2.6 to 2.7 million registered voters in Texas could be disenfranchised due to the identification requirements imposed by SB1. And indeed, in a hypothetical world that operated according to the implausible assumptions he lays out, that may well be true. But

⁵ For example, see <https://www.sos.state.tx.us/about/newsreleases/2022/101222.shtml>.

in the real world of voting in Texas, Professor Hersh's own analysis indicates that out of more than 8.1 million votes cast, there are at most 6,355 ballots that went uncounted. That is 0.078 percent of all votes cast, or 0.036 percent of all registered voters in Texas.⁶ In short, Professor Hersh's simulation estimate of failed mail-in voting was 417 times as large as his own empirical estimate based on actual voting.⁷ And as noted earlier, this much lower number is itself inflated, given some or all of these rejections could have been fraudulent votes, or even if not, could be due to voters failing to write down any identification number.

VII. Conclusion

28. In the conclusion of my first report in response to Professor Hersh, I stated that the burden imposed by SB1 on the handful of voters impacted by SB1 is likely minimal, and quite possibly zero. Professor Hersh's own empirical analyses in his second supplemental report provides direct evidence in support of that opinion. In addition, his empirical analyses of the 2022 election directly contradict both the assumptions used in his analyses of voter databases, and his conclusion that 2.7 million registered Texan voters could have their mail-in ballots rejected even if they fill out the ballot correctly. In particular, Professor Hersh's empirical analysis demonstrates that in the 2022 federal election, there were *at most* 6,355 mail-in votes that were rejected for identification reasons and were not cured or cast in person. By comparison, over 8.1 million votes were cast in that election. Moreover, given the clear learning curve associated with new regulations such as those imposed by SB1, as demonstrated by the decline in rejections from the primary to the general election of 2022, as

⁶ Per the Secretary of State Website, there were 8,102,908 votes cast and counted in the 2022 federal election. Thus, as a fraction of total votes cast and counted, 0.078 percent ($6,355/8,102,908$) of all votes cast were potentially "lost" due to SB1, or 0.036 percent of all registered voters in Texas ($6,355/17,672,143$). See <https://www.sos.state.tx.us/elections/historical/70-92.shtml>.

⁷ Professor Hersh's estimate of the potential mail-in ballot rejections was 15 to 16 percent of all registered voters; $15/0.036 = 417$.

well as factors laid out in my previous report, I believe it is likely that if anything, the rate of rejections will continue to decline going forward.

29. Importantly, even that figure of 6,355 exceeds the actual number of legally and properly cast votes that were not counted. This is because some, and potentially all, of those rejections could have occurred because the vote was illegally cast. Similarly, some, and potentially all, of those ballots could have been rejected because voters did not write down any identification number (or mistakenly wrote down an incorrect number). Professor Hersh cannot distinguish between either of those interpretations and his own hypothesis that the rejections were all due to the database issue deficiencies he asserts. Put differently, Professor Hersh's own analysis is consistent with a belief that exactly zero legitimate votes were lost in the 2022 federal election due to SB1's identification requirements. Similarly, even if one were to assume away the possibility of fraudulent voting, Professor Hersh's analysis is consistent with the belief that exactly zero votes failed to be cast and counted because of state voter database issues. As a result, I again conclude that the impact of SB1 on mail-in voting is almost certainly minimal, and very possibly zero.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'M. Hoekstra', with a stylized flourish at the end.

Mark Hoekstra, PhD

CURRICULUM VITAE

Mark Hoekstra

Texas A&M University
Department of Economics
275 Liberal Arts Social Sciences Building
College Station, TX 77840-4228

Office Phone: 979.845.7302
Email: markhoekstra@tamu.edu
<https://sites.google.com/view/markhoekstra>
[Google Scholar Profile \(link\)](#)

Academic Appointments

2018 – Present	Professor of Economics
2015 – Present	Private Enterprise Research Center Rex B. Grey Professor of Economics, Texas A&M University
2011 – 2018	Associate Professor of Economics, Texas A&M University
2006 – 2011	Assistant Professor of Economics, University of Pittsburgh

Research Appointments

2015 – Present	Research Associate, National Bureau of Economic Research
2013 – Present	Research Fellow, IZA
2011 – 2015	Faculty Research Fellow, National Bureau of Economic Research

Editorial Positions

2018 – Present	Associate Editor, <i>Journal of Labor Economics</i>
2015 – Present	Associate Editor, <i>Journal of Human Resources</i>

Education

Ph.D. Economics, University of Florida, August 2006
Dissertation Advisor: David Figlio

B.A. Economics, Hope College (*summa cum laude*), June 2001

Research Interests

Applied Microeconomics, including Labor Economics, Law and Economics, and the Economics of Education

Publications

“The Effect of Open-Air Waste Burning on Infant Health: Evidence from Government Failure in Lebanon” (with Pierre Mouganie and Ruba Ajeeb), forthcoming in *Journal of Human Resources*

“The Effect of School and Neighborhood Peers on Achievement, Misbehavior, and Adult Crime” (with Stephen B. Billings), forthcoming in *Journal of Labor Economics*

“Does Race Matter for Police Use of Force? Evidence from 911 Calls” (with CarlyWill Sloan), *American Economic Review* 2022, 112(3): 827-860.

“The Effect of Own-Gender Jurors on Conviction Rates” (with Brittany Street), *Journal of Law and Economics* 2021, 64(3): 513-537.

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“The Long-Run Effects of Disruptive Peers” (with Elira Kuka and Scott E. Carrell), *American Economic Review* 2018, 108(11): 3377-3415.

“Peer Quality and the Academic Benefits to Attending Better Schools (with Pierre Mouganie and Yaojing Wang), *Journal of Labor Economics* 2018, 36(4): 841-884.

“Cash for Corollas: When Stimulus Reduces Spending” (with Steven L. Puller and Jeremy West), *American Economic Journal: Applied Economics* 2017, 9(3): 1 – 35.

“Illegal Immigration, State Law, and Deterrence” (with Sandra Orozco-Aleman), *American Economic Journal: Economic Policy* 2017, 9(2): 228-252.

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“Does Strengthening Self-Defense Law Deter Crime or Escalate Violence? Evidence from Expansions to Castle Doctrine (with Cheng Cheng) *Journal of Human Resources* 2013, 48(3): 821-854.

“Family Business or Social Problem? The Cost of Unreported Domestic Violence” (with Scott E. Carrell) *Journal of Policy Analysis & Management* 2012, 31(4): 861-875.

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“The Ticket to Easy Street? The Financial Consequences of Winning the Lottery” (with Scott Hankins and Paige Marta Skiba) *Review of Economics and Statistics* 2011, 93(3): 961-969.

“Does Drinking Impair College Performance? Evidence from a Regression Discontinuity Approach” (with Scott E. Carrell and James West) *Journal of Public Economics* 2011, 95 (1-2): 54-62.

“Does High School Quality Matter? Evidence from Admissions Data” (with Daniel Berkowitz) *Economics of Education Review* 2011, 30(2): 280-288.

“Lucky in Life, Unlucky in Love? The Effect of Random Income Shocks on Marriage and Divorce” (with Scott Hankins) *Journal of Human Resources* 2011, 46(2): 403-426.

“Externalities in the Classroom: How Children Exposed to Domestic Violence Affect Everyone’s Kids” (with Scott E. Carrell) *American Economic Journal: Applied Economics* 2010, 2(1): 211-228.

“The Effect of Attending the Flagship State University on Earnings: A Discontinuity-Based Approach” *Review of Economics and Statistics* 2009, 91(4): 717-724.

Other Publications

“Returns to Education Quality”. 2020. In Steve Bradley and Colin Green (Eds.), *The Economics of Education: A Comprehensive Overview*, 2nd edition. Edited by Steve Bradley and Colin Green. Elsevier Academic Press.

“Domino Effect” (with Scott E. Carrell). 2009. *Education Next*: 9(3). Available at http://www.hoover.org/publications/ednext/Domino_Effect.html.

Working Papers

“The Scale and Nature of Neighborhood Effects on Children: Evidence from a Danish Social Housing Experiment” (with Stephen B. Billings and Gabriel Pons Rotger)

“Illegal Immigration: The Trump Effect” (with Sandra Orozco-Aleman)

“When Should We Trust Weighted Least Squares Estimates?” (with Cheng Cheng)

Awards

IZA Young Labor Economist Award, 2012 (with Scott E. Carrell)

Teaching Experience

Texas A&M University:

Sports Economics, Public Economics I (PhD-level), Econometrics II (1st-year PhD), Labor Economics I (2nd-year PhD)

University of Pittsburgh:

Labor Economics (PhD-level), Sports Economics, Intermediate Public Finance, Industrial Organization, and Research Methods in Empirical Microeconomics

University of Florida:

Public Finance and Managerial Economics

Department Service

Executive Committee (Fall 2011 – Fall 2014; Fall 2016 – Spring 2017)

Graduate Instruction Committee (Fall 2012 – Spring 2019)

Director of PhD Admissions (Fall 2012 – Spring 2015; Fall 2018 – Spring 2019; Spring 2023)

Director of PhD Program (Fall 2012 – Fall 2014)

Applied Microeconomics Search Committee (2011-12, 2012-13, 2014-15)

Primary Dissertation Advisor (Initial Placement, Current Position)

(Non-tenure track positions and co-advisor roles are noted if applicable; excludes committee memberships)

Suhyeon Oh (expected 2025)

Maya Mikdash (expected 2024)

Adam Bestenbostel (2022, Air Force Academy, non-tenure-track Assistant Professor)

Meradee Tangvatchaparong (2021, 5-year non-tenure-track Assistant Professor, Hitotsubashi University's Institute of Economic Research))

CarlyWill Sloan (2020, Claremont Graduate University, now at United States Military Academy West Point)

Brittany Street (2019, University of Missouri)

Abigail Peralta (2018, Louisiana State University)

Yaojing Wang (2017, Bank of America, co-advised with Li Gan, now at Peking University)

Vijetha Koppa (2016, Stephen F. Austin State University, now at Institute of Management

	Technology, Dubai)
<u>Jillian Carr</u>	(2015, Purdue University)
<u>Pierre Mouganie</u>	(2015, American University of Beirut, now at Simon Fraser University)
<u>Gonzalo Sanchez</u>	(2015, Pontificia Universidad Católica de Ecuador)
<u>Cheng Cheng</u>	(2014, University of Mississippi, now at Amazon)

Presentations

Essen Health Conference (keynote speaker, scheduled May 2023); Clemson University (November 2022); Berlin Applied Micro Seminar, October 2022; Simon Fraser University, April 2022, Jinan University, October 2021; National University of Singapore, April 2021; University of Florida, April 2021; ASSA American Economic Association Annual Meeting (x2), January 2021; San Diego State University, October 2020; Boston University, September 2020; University of Maryland, September 2020; Notre Dame, September 2020; NBER Summer Institute – Crime, July 2020; Claremont McKenna College, February 2020; Claremont Graduate University, January 2020; American Economic Association Annual Conference, January 2020; Southern Economic Association Annual Conference, November 2019; Victoria University of Wellington Applied Econometrics Workshop, October 2019 (keynote speaker); University of Mississippi, October 2019; Mississippi State University, October 2019; Stata/Texas Applied Microeconomics Conference, October 2019; University of Florida, May 2019; Georgia Tech, March 2019; West Virginia University, March 2018; University of Tennessee, January 2018, Purdue University, January 2018; University of Kentucky, October 2017; Annual Meeting of the Western Economic Association, June 2017; University of Leicester, June 2017; University of Leicester Domestic Violence Workshop, June 2017; American University of Beirut, March 2017; University of Uppsala, March 2017; Montana State University, April 2016; American University of Beirut, March 2016; Columbia University, February 2016; Annual Meeting of the American Economic Association Meeting (January 2016); Annual Meeting of the Southern Economic Association (November 2015); NBER Education Program Meeting (November 2015); Brigham Young University, February, 2015; Federal Reserve Bank of New York, February, 2015; Stata/Texas Applied Microeconomics Conference, November 2014; University of Florida, November, 2014; Louisiana State University, October 2014; Institute for the Study of Labor (IZA), October 2014; University of Wisconsin-Milwaukee, October 2013; Ghent University, September 2013; University of Texas – Dallas, April 2013; Stata/Texas Applied Microeconomics Conference, December 2012; Southern Economic Association Annual Meeting, November 2012; University of Texas-Austin, April 2012; Georgetown Public Policy Institute, April 2012; University of Missouri, October 2011; Baylor University, August 2011; Texas A&M University, November 2010; University of Houston, October 2010; University of Pittsburgh School of Medicine, Psychiatry and Epidemiology Seminar, October 2009; NBER Summer Institute, Law and Economics Program, July 2009; University of California at Davis, April 2009; University of California at Berkeley Labor Lunch, March 2009; American Economic Association Annual Meetings, January 2009; Texas A&M University, September 2008; Carnegie Mellon University, September 2008; NBER Summer Institute, Economics of Education Program, July 2008; Society of Labor Economists Annual Meeting, May 2008; Vanderbilt University, April 2008; NBER Education Working Group, November 2006

Other Information

Referee: American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, American Economic Review, American Journal of Health Economics, American Sociological Review, Berkeley Electronic Press, Contemporary Economic Policy, Economic Development and Cultural Change, Economic Inquiry, Economic Journal, Economics of Transition, Education Economics, Education Finance and Policy, Empirical Economics, European Journal of Law & Economics, Journal of Applied Econometrics, Journal of Comparative Economics, Journal of Demographic Economics, Journal of the European Economic Association, Journal of Health Economics, Journal of Human Resources, Journal of Labor Economics, Journal of Policy Analysis and Management, Journal of Political Economy, Journal of Population Economics, Journal of Public Economics, Journal of Sports Economics, Journal of Urban Economics, Labour Economics, Proceedings of the National Academy of Sciences (PNAS), Quantitative Finance, Quarterly Journal of Economics, Regional Science and Urban Economics, Review of Economics and the Household, Review of Economics and Statistics, and Southern Economic Journal.

Reviewer: Israel Science Foundation, National Science Foundation, Marsden Fund (New Zealand), Dutch Research Council

Citizenship: United States